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**DIETS OF URBAN AND VILLAGE FAMILIES IN THE
UNITED STATES OF AMERICA: 1914-1936**

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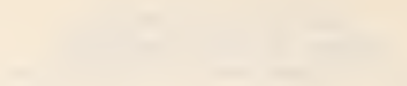
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A knowledge of the food consumption habits of different population groups is needed in dealing with many of our current social and economic problems. The interrelationship between diet and health is gaining recognition by the public, so that lively interest attends discussions of what constitutes an adequate diet, and how much a suitable food supply costs. The appraisal of present dietary habits in the light of modern knowledge of food and nutrition is basic to educational programs in food selection. Quantitative information on present food habits is also indispensable in determining the foods to be priced and the weight to be assigned to each in developing cost-of-food indexes, and in pricing food budgets. In addition, information regarding consumption at different economic levels serves to indicate the probable shifts in consumption as barriers to free choice are lifted. These are matters of interest to consumer, labor, farm, and business groups, as well as to civic and governmental agencies.

Urban and Village Diets: 1914-33

For more than forty years, the U. S. Department of Agriculture has concerned itself with the content, cost, and nutritional adequacy of American diets, and from time to time has collected detailed information on family food consumption. The U. S. Bureau of Labor Statistics and other public and private agencies have also collected many data on family food expenditures and on food consumption patterns. Many of the studies on American diets made in the past are not useful in making a complete summary of food consumption, because the data have not been published in sufficient detail. Some reports give information on the quantities of different foods consumed, but not on cost; some present expenditures only; some deal with nutritive value only; some give information only on certain food items rather than on the diet as a whole,

During the 20-year period 1914-1933, six studies of city and village family food consumption have been made from which detailed data were available to the writer on the kind, quantity, and cost of food consumed by individual families. One small study was published in considerable detail. The others are still unpublished or only partially published; but the original records were put at the disposal of the writer. Altogether these six studies furnished 1020 records. About two-thirds of these records were secured from families of business men and professional workers; about one-sixth were from families of wage earners and about one-sixth from low-income, semi-dependent families. Supporting these data there are two averages reported by the U. S. Bureau of Labor Statistics, and representing 12,000 families of wage earners. One of these averages is from data obtained in 92 cities located in 42 States in 1917-19; the other from a small study made in Detroit, Michigan in 1929.



The American Medical Association is a non-profit corporation organized for the purpose of promoting the science and art of medicine, and the health of the people of the United States. It was organized in 1847, and has since that time been the leading organization of the medical profession in this country. Its membership is composed of physicians, surgeons, dentists, and other medical practitioners, who are elected to the Association by their respective state medical societies. The Association's principal office is in Chicago, Illinois, and it has branches in every state of the Union. Its work is carried on through its various departments, which include the publication of the Journal, the holding of annual conventions, the conducting of research, and the promotion of medical education. The Association is also engaged in many other activities, such as the establishment of hospitals, the maintenance of a library, and the support of medical research.

MEMBERSHIP LIST

The following is a list of the members of the American Medical Association, as of January 1, 1914. The list is arranged alphabetically by the name of the member, and includes the name, address, and profession of each member. The members are divided into two classes: regular members and life members. Regular members are those who have been elected to the Association for a term of one year, and who are eligible for re-election. Life members are those who have been elected to the Association for a term of life, and who are not eligible for re-election. The list includes the names of all members who were elected to the Association during the year 1913, and of all members who were elected during the year 1912. The list also includes the names of all members who were elected to the Association during the year 1911, and of all members who were elected during the year 1910. The list is a complete and accurate record of the membership of the American Medical Association, and is of great value to the medical profession and to the public.

All of the materials described above were considered in arriving at an approximation of food consumption trends with changing level of expenditure for food. Every season of the year, and different regions of the country were represented, but not equally well. From these data it appears that families spending comparable amounts for food buy much the same kind of diets regardless of the occupational classification. The diets of families of wage earners appear to be much more like those of families of professional workers if the levels of expenditure for food are similar, than are the diets of families of wage earners of different economic level. Because of the relatively small number of dietary records available, all of the data were combined without reference to type of occupation, to show the effect of level of expenditure for food upon the consumption of different important food groups.

Diets of Wage Earners and Salaried Workers: 1935-36.

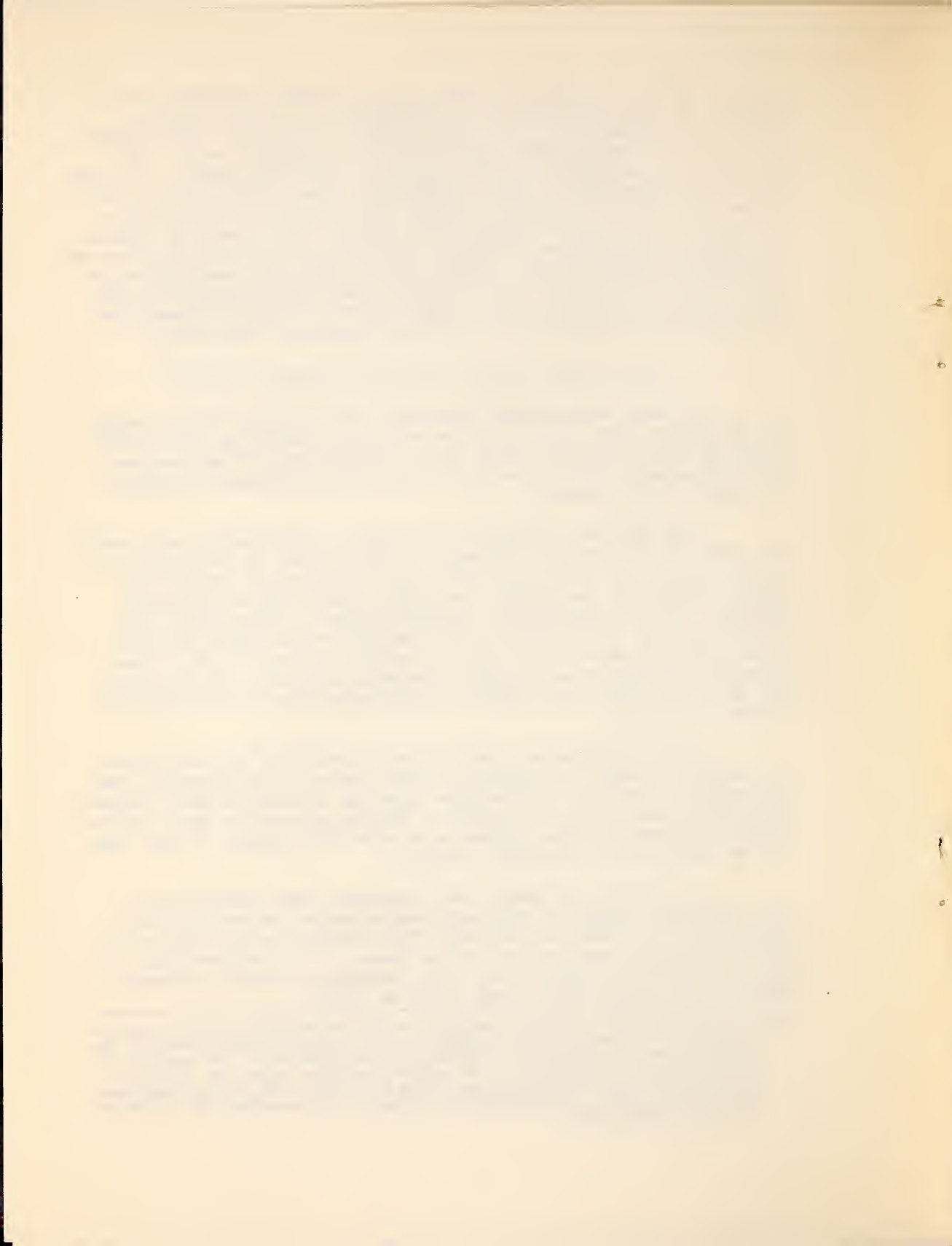
Between December 1934 and March 1936 records of food consumption at each of four quarters of the year were obtained as part of the Bureau of Labor Statistics study of the disbursements of wage earners and lower-salaried clerical workers, made for the purpose of revising its cost-of-living indexes.

The families included in the study of disbursements as a whole, were carefully selected to represent a cross-section of the families of employed white wage earners and lower-salaried clerical workers (in certain sections of the country the study included Negro and Mexican families). All of the families included had one or more workers who worked a minimum of 1,008 hours in at least 36 weeks during the year. An exception was made in the case of families in which the chief wage earner was employed in an industry distinctly seasonal. Such families were included if the chief earner had employment for 3-1/2 8-hour days in each of 30 weeks.

Since the data were being obtained primarily for the purpose of providing a basis for indexes of living costs, it was important that they should not reflect the distorted spending of families whose incomes had been abnormally low or irregular. On that account, no data were included from families whose incomes were under \$500 a year, or from families who received relief during the year.

The records of weekly food consumption were obtained from 2,746 families included in the large random sample who were willing to cooperate in this phase of the work. These families were living in 32 cities scattered throughout the United States. It is believed that the group of families willing to keep food records were fairly representative of the group included in the study as a whole.

Plans for obtaining the information relative to food consumption were made cooperatively by the Bureau of Labor Statistics and the Bureau of Home Economics. The field work was supervised by the Bureau of Labor Statistics. The statistical analysis from the standpoint of the content, nutritive value, and economy of diets was supervised by the Bureau of Home Economics. Both Bureaus conducted their work, in part, as Federal works projects, in cooperation with the Works Progress Administration.



Trends in Food Consumption in the United States.

Over a period of many years the total volume of food disappearing into consumptive channels has been fairly constant, although the relative importance of different groups of food has shifted. For example, there have been decreases in the consumption of grain products, potatoes, and meats, and increases in the consumption of sugar, milk and cream, citrus fruits, and some of the succulent vegetables, such as lettuce, spinach, cauliflower, snap beans, and celery. In the main, these changes have come about fairly gradually. They are due to improved facilities for transportation, storage, and marketing of the more perishable goods, and the consequent availability of a wide variety of foods in great abundance, as well as to the emphasis which the newer knowledge of nutrition has placed on milk, vegetables, and fruit. During the years 1931-33 the apparent consumption of food was about as high as during 1925-29, notwithstanding the great reduction in consumer incomes. There was practically no decrease in the total volume of food produced. In order to move this undiminished volume into consumptive channels, food prices were adjusted to what consumers could pay, and the general level of food consumption was well maintained.

Within a relatively stable national supply there have always been wide variations in the quantity and kinds of food consumed by family groups. In part these variations reflect individual needs, in part, acquired food habits, and in part, adjustments which are enforced by economic limitations. The very liberal supply of food enjoyed by some groups of the population raises the national average but does not confer any benefit on those families whose circumstances do not enable them to secure a food supply fostering a full measure of health and efficiency. How great these variations are from family to family can best be learned through studies of the food consumption of individual families.

Each available study or group of studies of family food consumption has been classified by the Bureau of Home Economics according to the amount of money spent for food per person per year. (Food expenditures were adjusted to a common base period by means of the U. S. Bureau of Labor Statistics retail food index.) Families were grouped together that were spending less than \$30 per person per year for food (at January 1934 price level), from \$30 to \$60, from \$60 to \$90, and so on up to those that were spending \$240 or more per person per year for food. The average quantities of the various foods consumed were obtained for all of the families in the study spending comparable amounts for food, and for each class of foods a scatter diagram or a bar diagram has been made showing per capita consumption in each study or group of studies.

THE HISTORY OF THE UNITED STATES

The first part of the history of the United States is the period from the discovery of the continent by Christopher Columbus in 1492 to the establishment of the first permanent settlements. This period is characterized by the exploration of the continent by Spanish, French, and English explorers, and the establishment of the first permanent settlements by the English in 1607. The second part of the history is the period from the establishment of the first permanent settlements to the American Revolution in 1776. This period is characterized by the growth of the colonies, the struggle for independence, and the establishment of the United States as a new nation. The third part of the history is the period from the American Revolution to the present. This period is characterized by the development of the United States as a major world power, the expansion of its territory, and the growth of its population.

The history of the United States is a story of exploration, discovery, and growth. It is a story of the struggle for independence and the establishment of a new nation. It is a story of the development of the United States as a major world power, the expansion of its territory, and the growth of its population. The history of the United States is a story of the American dream, of the pursuit of happiness, and of the belief in a better future for all.

The history of the United States is a story of the American people, of their struggles, and of their achievements. It is a story of the American spirit, of the American dream, and of the American way of life. The history of the United States is a story of the American people, of their struggles, and of their achievements. It is a story of the American spirit, of the American dream, and of the American way of life.

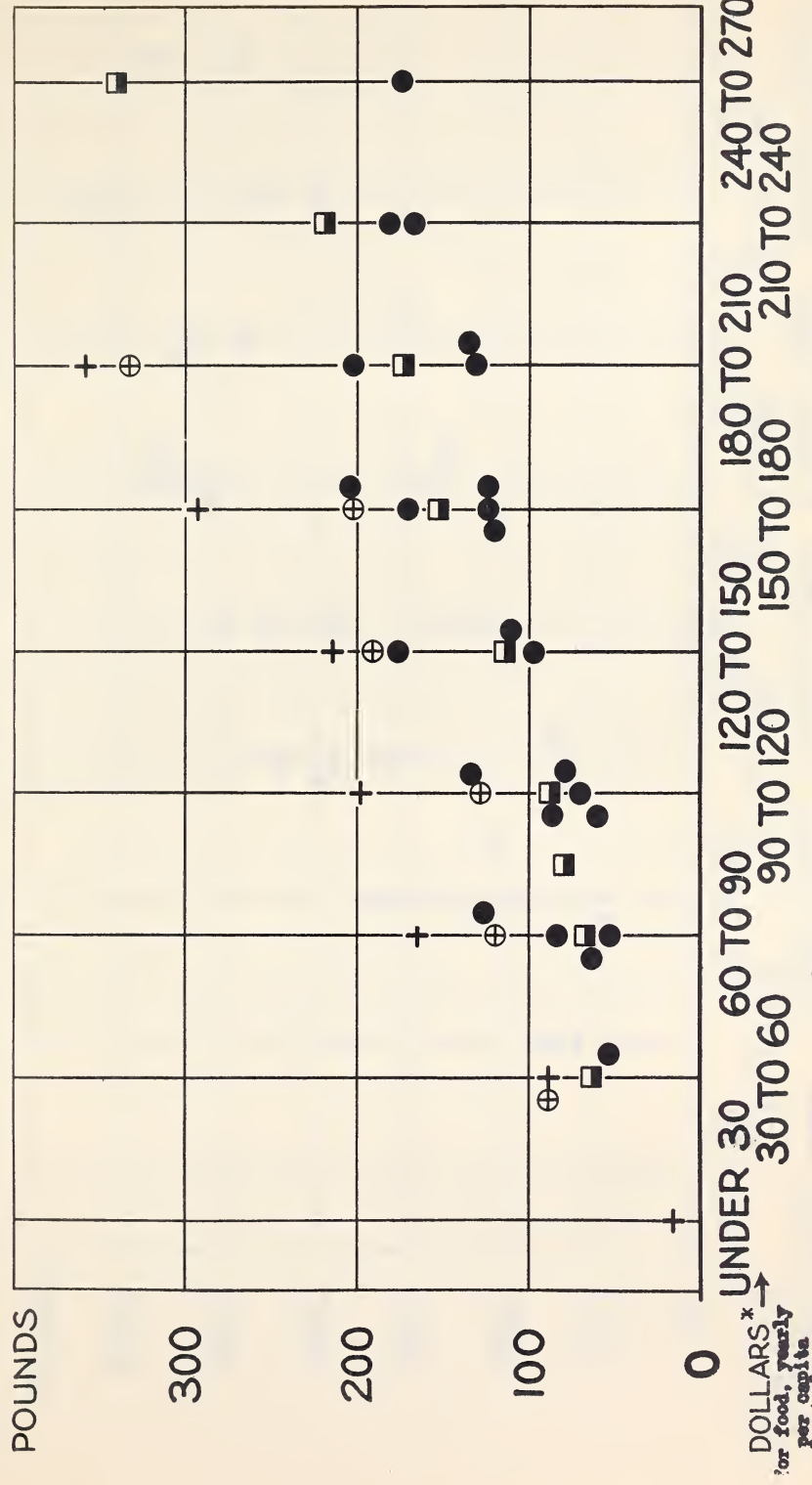
The first two charts show the trend in consumption of fruits and vegetables (other than potatoes and dried legumes) and of meats, both by level of expenditure for food, and by the successive periods of time. (Symbols of different shapes are used to represent studies made in different periods. Crosses represent food consumption in the decade 1894 to 1904; the encircled crosses, food consumption of families studied between 1905 and 1914; the half squares, studies made between 1915 and 1924, and the black circles the studies which were made between 1925 and 1934.)

The first chart tells something of the variations in the consumption of vegetables and fruit. Crosses, representing consumption in the decade 1894-1904, are usually near the bottom in each classification by level of expense for food, whereas most of the symbols near the top, represent consumption during the period 1924-34. Even in recent times, when the food value of vegetables and fruit has been given more recognition than formerly, only small quantities are purchased when there is less than \$60 per person per year for food. But years ago, as well as recently, the trend was the same -- more vegetables and fruits when there is more money for food.

The second chart tells something of the variations in the consumption of lean meats and fish. The crosses, representing consumption in the decade 1894-1904, show a higher than current level of meat consumption at each level of food expenditure, and a rate of increase in meat consumption with increasing expenditures for food more accelerated in the earlier decades than during the last.

Both charts show that there is considerable variation in consumption at any one level of expenditure, but the trends are definite and unmistakable.

Lean Meat, Fish and Poultry: Estimated Yearly Per Capita Consumption by Groups of Nonfarm Families



1. The first part of the paper is devoted to a general discussion of the problem.

2. In the second part, we shall consider the case of a single variable.

3. The third part is devoted to the case of two variables.

4. In the fourth part, we shall consider the case of three variables.

5. The fifth part is devoted to the case of four variables.

6. In the sixth part, we shall consider the case of five variables.

7. The seventh part is devoted to the case of six variables.

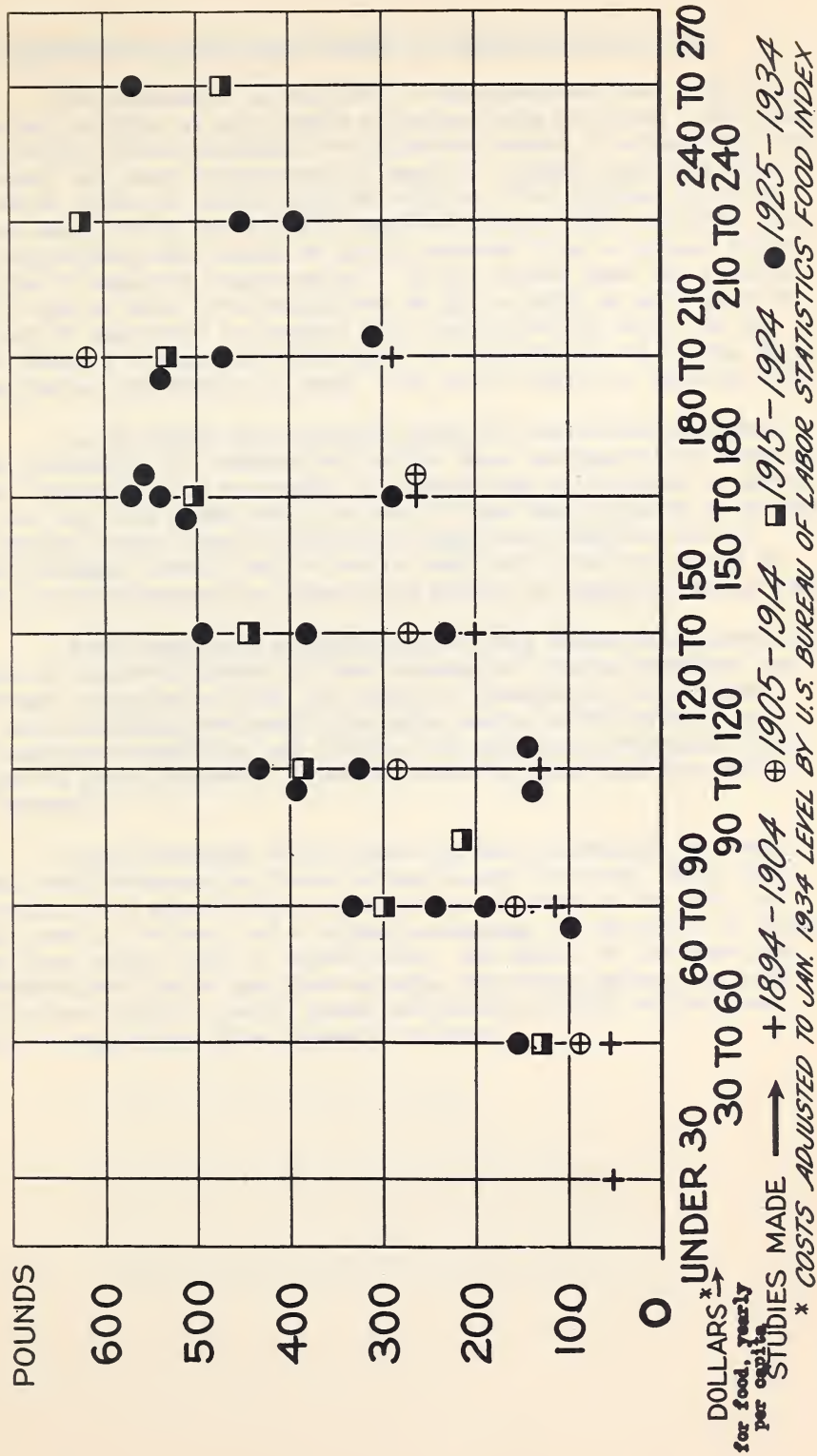
8. In the eighth part, we shall consider the case of seven variables.

9. The ninth part is devoted to the case of eight variables.

10. In the tenth part, we shall consider the case of nine variables.

11. The eleventh part is devoted to the case of ten variables.

Vegetables[✓] and Fruits: Estimated Yearly Per Capita Consumption by Groups of Nonfarm Families





Graph showing the relationship between the concentration of a solution and the measured property. The curve indicates that the measured property increases with concentration, but the rate of increase decreases as concentration increases.

Consumption at Different Levels of Expenditure for Food

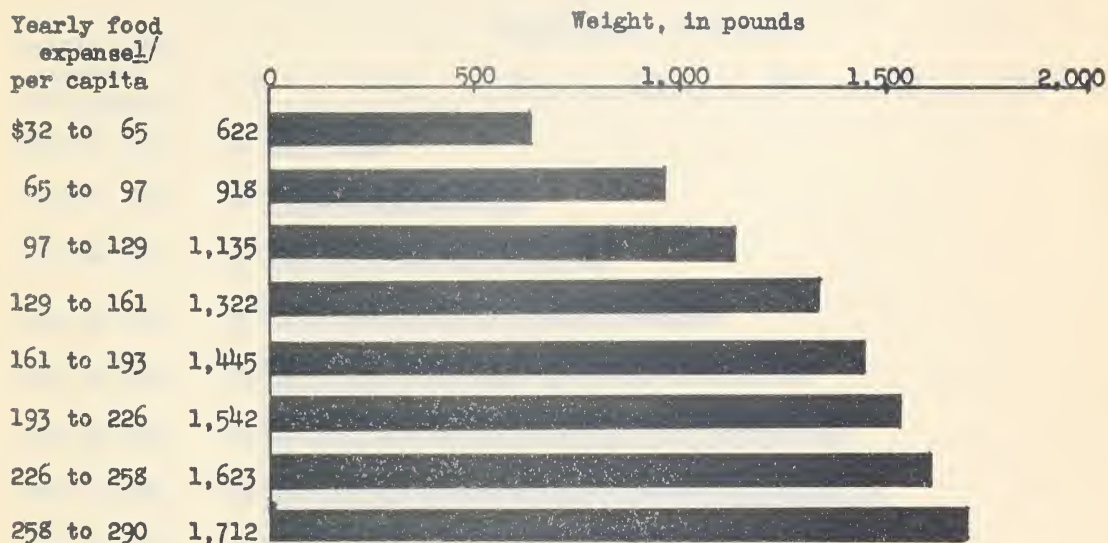
The abundance and variety of the American food supply is reflected in diets at all levels of expenditure for food. The seven charts which follow indicate for different levels of expenditure for food about how much is consumed of each of several important types of food as shown by family dietary studies. The figures are from studies among urban and village families between 1914 and 1933, and from preliminary data based on spring records from a current study of diets of employed wage earners. In the latter case the average weekly figures have been multiplied by 52 in order to make them of an order of magnitude to compare with the 1914-1933 data. In so far as there are seasonal variations in consumption, as in the case of vegetables and fruits or eggs, this point should be kept in mind.

In all cases the averages refer to quantities available to the household for consumption rather than the quantities actually eaten. Probably from one study to another the differences in averages for any food group would be less if the data referred to actual consumption rather than to available supplies. Families at the higher economic levels tend to waste much more food than those at lower, but differences are great from family to family at every level.

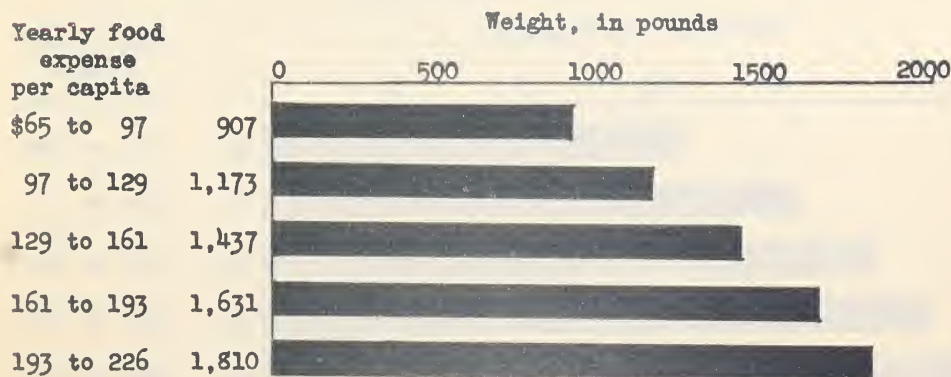
With increasing expenditure for food there is a marked increase in the total amount of food purchased. These increases are not evenly distributed from one group of commodities to another. They are especially noticeable in eggs, meats, milk, butter, and the succulent vegetables and fruits, and much less pronounced with respect to grain products, potatoes, dried legumes and fats (other than butter).

The percentage of the grain products purchased in ready-to-eat form increases as there is more money for food. Also with increasing food expenditures, a higher percentage of the fats are in the form of butter, and a higher percentage of the milk, in fresh fluid form rather than in canned form. The share of the succulent vegetables and fruits that have special nutritive values, as tomatoes, citrus fruits, leafy, green and yellow-colored varies from region to region and from season to season.

1914-1933: Weight of food estimated as consumed per capita per year
nonfarm families

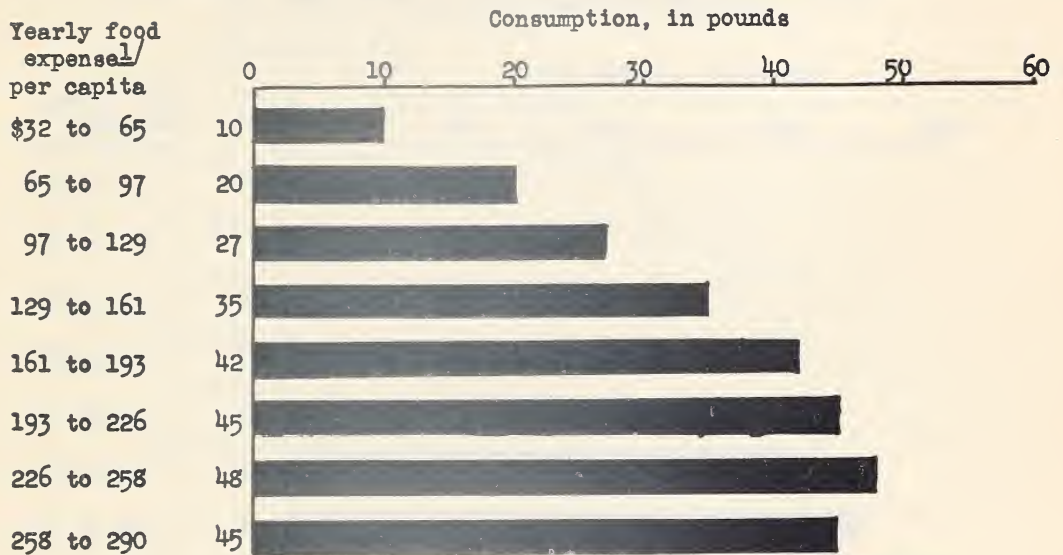


March - May 1935: Weight of food consumed weekly per capita by families
of employed wage earners and salaried workers, multiplied by 52

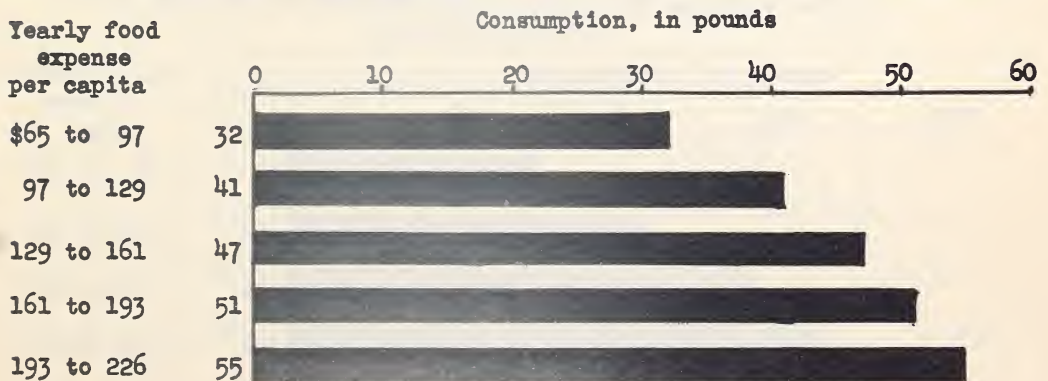


^{1/} Adjusted to March - May 1935 price level.

1914-1933: EGGS: Estimated yearly per capita
consumption, nonfarm families

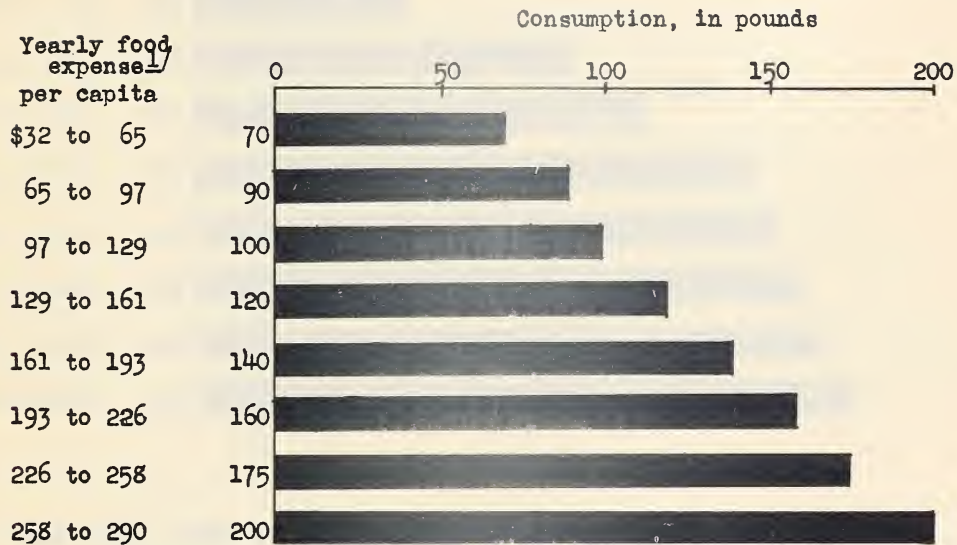


March - May 1935: EGGS: Weekly per capita consumption by families
of employed wage earners and salaried workers,
multiplied by 52

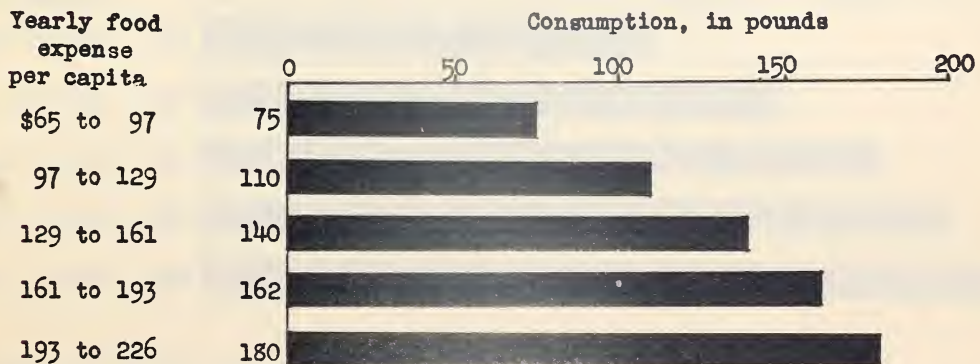


^{1/} Adjusted to March - May 1935 price level.

1914-1933: LEAN MEATS, POULTRY, FISH: Estimated yearly per capita consumption, nonfarm families



March - May 1935: LEAN MEATS, POULTRY, FISH: Weekly per capita consumption by families of employed wage earners and salaried workers, multiplied by 52

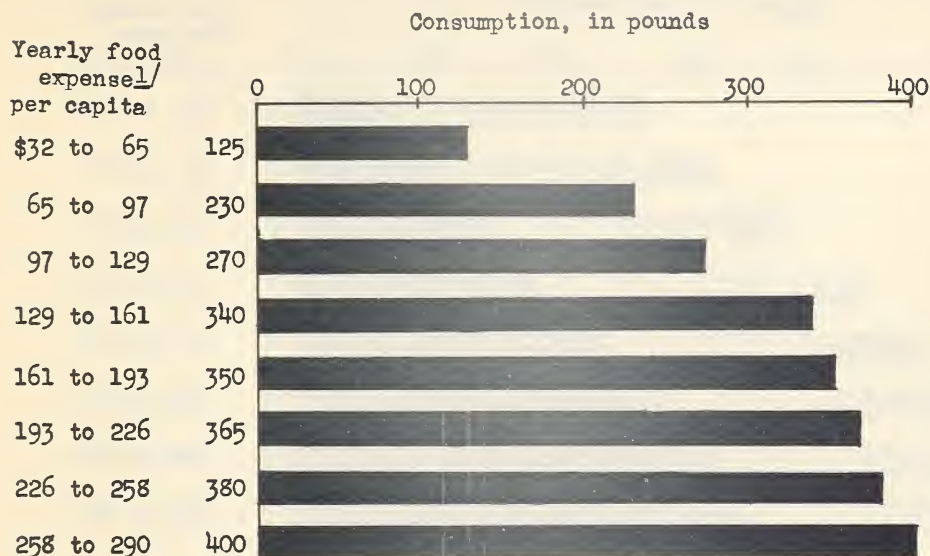


1/ Adjusted to March - May 1935 price level.

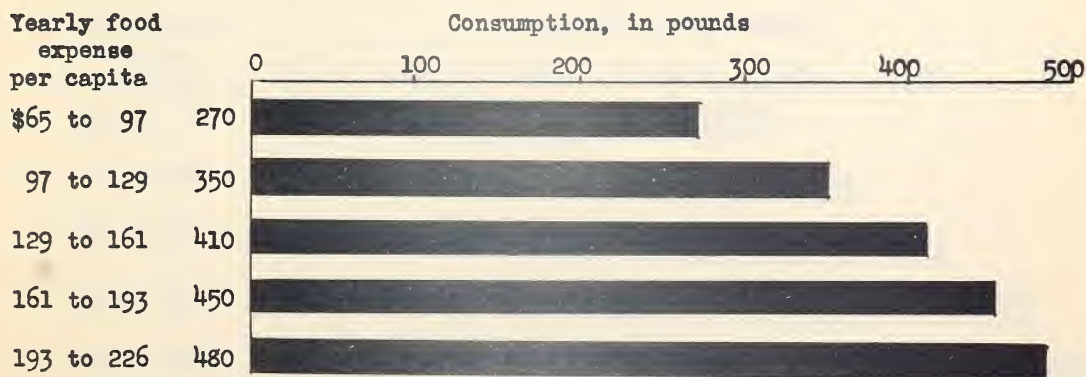
TABLE I	
Summary of the results of the experiments	
Experiment	Result
1. The effect of the concentration of the solution on the rate of reaction.	The rate of reaction increases with the concentration of the solution.
2. The effect of the temperature on the rate of reaction.	The rate of reaction increases with the temperature.
3. The effect of the surface area of the solid reactant on the rate of reaction.	The rate of reaction increases with the surface area of the solid reactant.
4. The effect of the catalyst on the rate of reaction.	The rate of reaction increases with the catalyst.
5. The effect of the pressure on the rate of reaction.	The rate of reaction increases with the pressure.
6. The effect of the volume of the gas on the rate of reaction.	The rate of reaction increases with the volume of the gas.
7. The effect of the concentration of the gas on the rate of reaction.	The rate of reaction increases with the concentration of the gas.
8. The effect of the pressure of the gas on the rate of reaction.	The rate of reaction increases with the pressure of the gas.
9. The effect of the volume of the liquid on the rate of reaction.	The rate of reaction increases with the volume of the liquid.
10. The effect of the concentration of the liquid on the rate of reaction.	The rate of reaction increases with the concentration of the liquid.

TABLE II	
Summary of the results of the experiments	
Experiment	Result
1. The effect of the concentration of the solution on the rate of reaction.	The rate of reaction increases with the concentration of the solution.
2. The effect of the temperature on the rate of reaction.	The rate of reaction increases with the temperature.
3. The effect of the surface area of the solid reactant on the rate of reaction.	The rate of reaction increases with the surface area of the solid reactant.
4. The effect of the catalyst on the rate of reaction.	The rate of reaction increases with the catalyst.
5. The effect of the pressure on the rate of reaction.	The rate of reaction increases with the pressure.
6. The effect of the volume of the gas on the rate of reaction.	The rate of reaction increases with the volume of the gas.
7. The effect of the concentration of the gas on the rate of reaction.	The rate of reaction increases with the concentration of the gas.
8. The effect of the pressure of the gas on the rate of reaction.	The rate of reaction increases with the pressure of the gas.
9. The effect of the volume of the liquid on the rate of reaction.	The rate of reaction increases with the volume of the liquid.
10. The effect of the concentration of the liquid on the rate of reaction.	The rate of reaction increases with the concentration of the liquid.

1914-1933: MILK: Estimated yearly per capita consumption,
nonfarm families



March - May 1935: MILK: Weekly per capita consumption by families of
employed wage earners and salaried workers,
multiplied by 52



^{1/} Adjusted to March - May 1935 price level.

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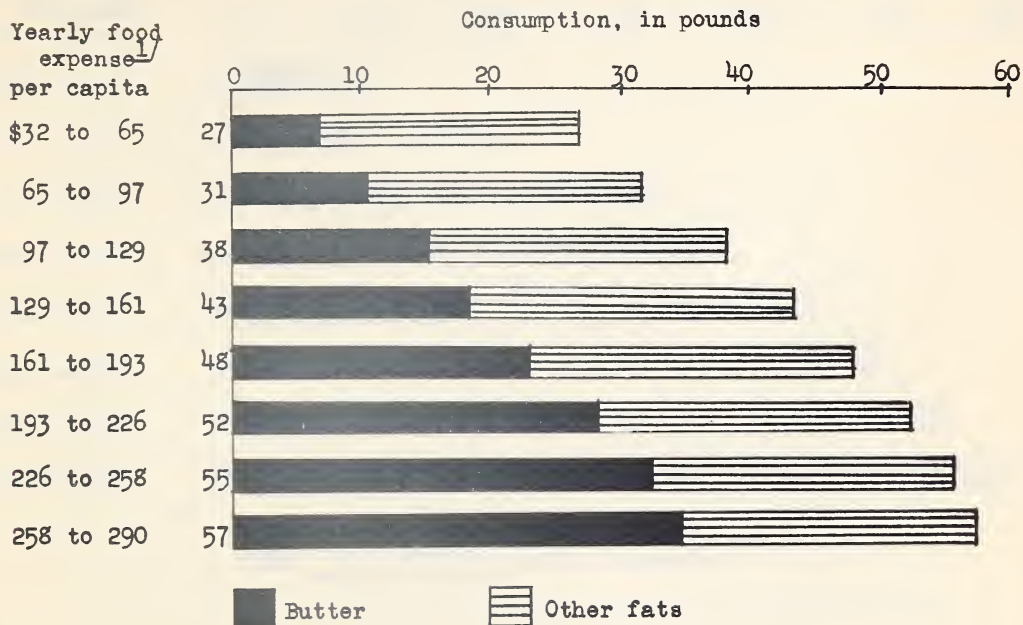
List of Publications	
1. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 100 (1977).	
2. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 110 (1977).	
3. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 120 (1977).	
4. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 130 (1977).	
5. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 140 (1977).	
6. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 150 (1977).	
7. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 160 (1977).	
8. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 170 (1977).	
9. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 180 (1977).	
10. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 190 (1977).	

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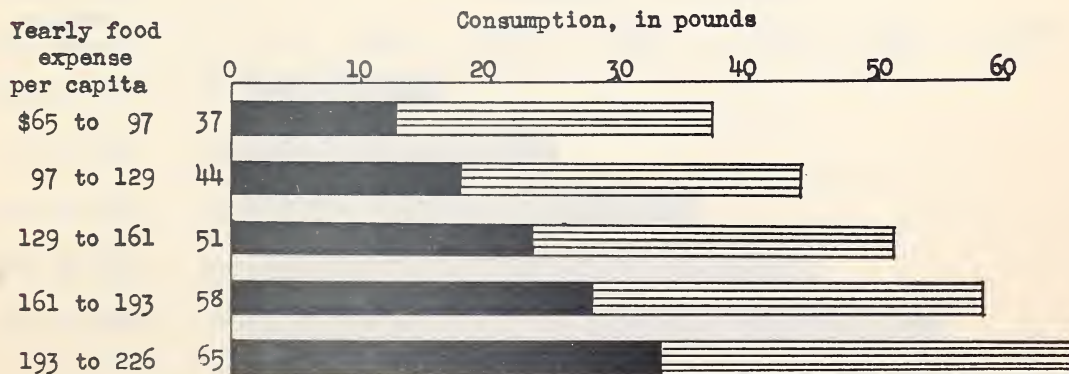
DEPARTMENT OF CHEMISTRY

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2. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 210 (1977).	
3. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 220 (1977).	
4. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 230 (1977).	
5. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 240 (1977).	
6. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 250 (1977).	
7. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 260 (1977).	
8. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 270 (1977).	
9. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 280 (1977).	
10. J. H. Goldstein, R. W. Lenz, and J. E. McGrath, <i>Macromolecules</i> , 10 , 290 (1977).	

1914-1933: BUTTER AND OTHER FATS: Estimated yearly
per capita consumption, nonfarm families



March - May 1935: BUTTER AND OTHER FATS: Weekly per capita consumption by
families of employed wage earners and salaried workers,
multiplied by 52



^{1/} Adjusted to March - May 1935 price level.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

LECTURE NOTES

BY

PROFESSOR

JOHN D. MATYJKA

CHICAGO, ILLINOIS

1960

1961

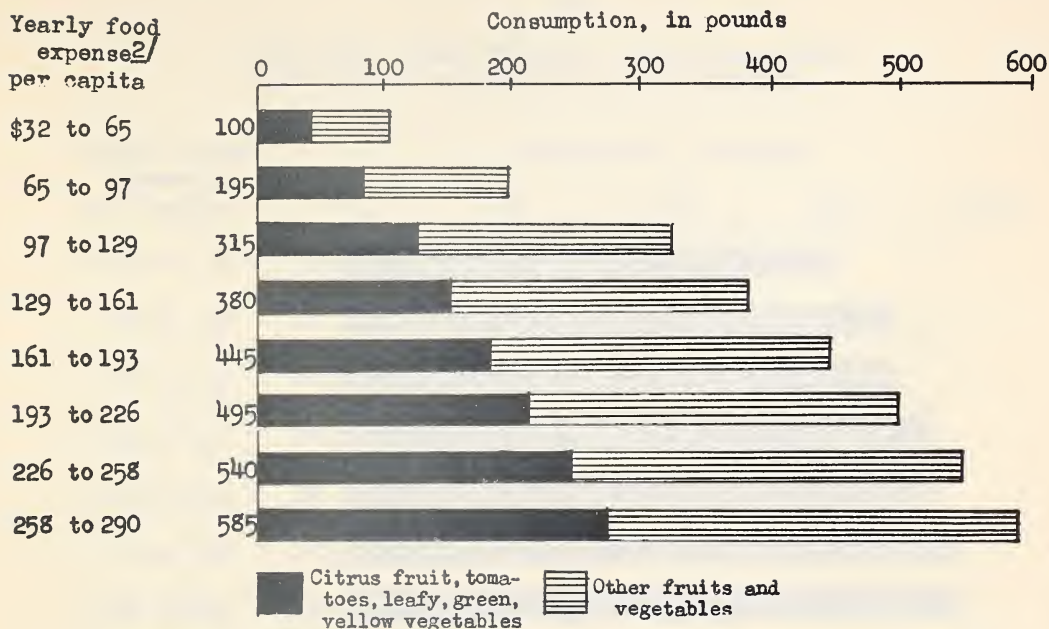
1962

1963

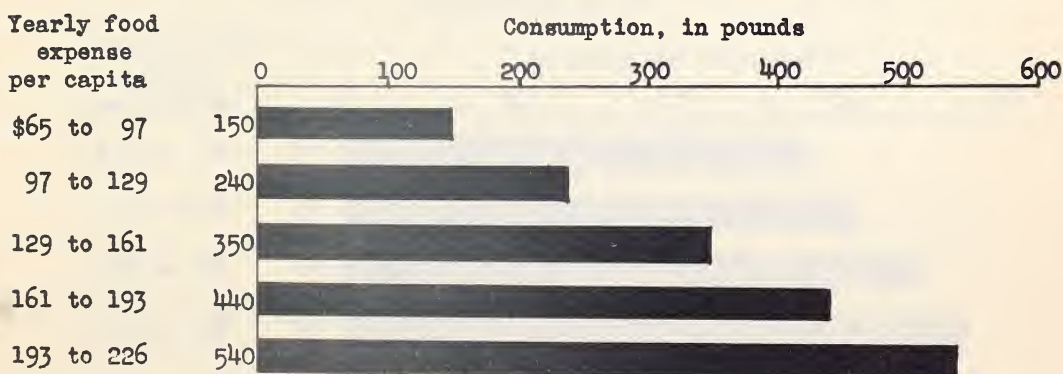
1964

1965

1914-1933: FRUITS AND VEGETABLES^{1/}: Estimated yearly per capita consumption, nonfarm families



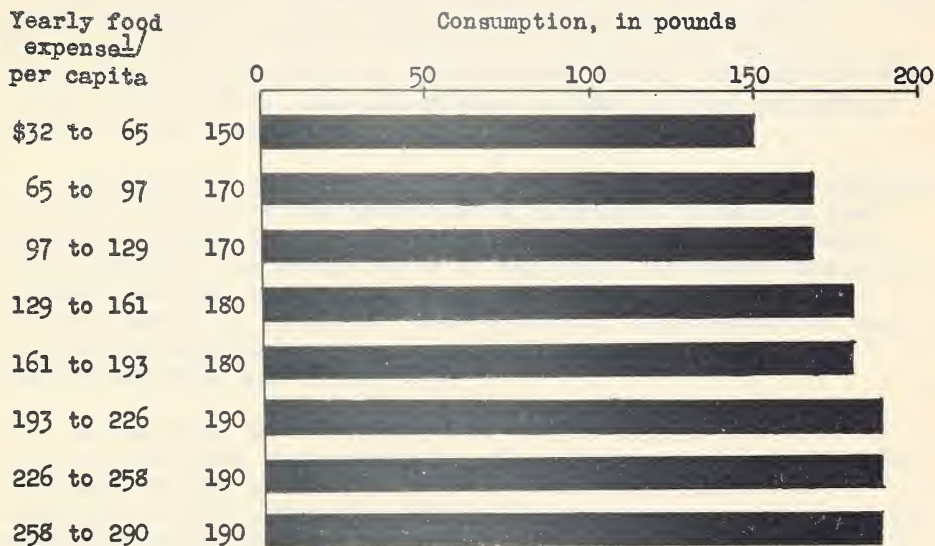
March - May 1935: FRUITS AND VEGETABLES^{1/}: Weekly per capita consumption by families of employed wage earners and salaried workers, multiplied by 52



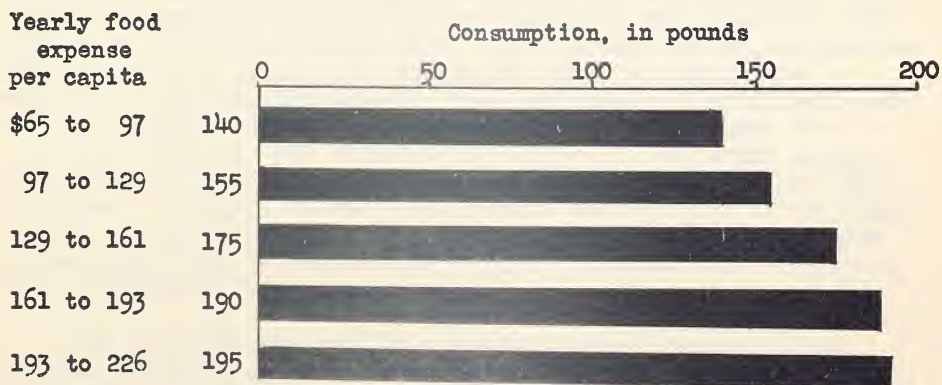
^{1/} Exclusive of potatoes and dried legumes.

^{2/} Adjusted to March - May 1935 price level.

1914-1933: GRAIN PRODUCTS: Estimated yearly
per capita consumption, nonfarm families



March - May 1935: GRAIN PRODUCTS: Weekly per capita consumption
by families of employed wage earners and salaried workers,
multiplied by 52



1/ Adjusted to March - May 1935 price level.

Nutritive Value of Diets

According to present knowledge, food must supply some 30 or more different nutrients, in order to provide the needed proteins of high quality, the essential minerals and vitamins, as well as the necessary energy-yielding food. Fortunately, many of these substances are so widely distributed in common foods that there is little danger of shortage in freely chosen diets. But some are very unevenly distributed, and unless care is taken in food selection, will be meagerly supplied.

In so far as the necessary data are available, dietary analyses include estimates of the quantities of nutrients present in food which are significant in appraising quality in diet. In studies here presented, the energy value of the diets, and their content of protein, calcium, phosphorus, iron, and vitamins A, B, C and G (flavin) have been computed. The figures on food composition used in the calculations have been compiled from several published sources and from unpublished data.

In the main, the available data on food composition refer to the raw, untreated food materials. The nutritive content of foods, especially so far as the fat, mineral, and vitamin values are concerned, may be altered greatly by the treatment to which food is subjected in preparation and service. This point should be kept in mind in interpreting the results of this study.

In general, the nutritive value of family diets increases as more money is spent for food. In large measure this is due to more plentiful food supply purchased. However, the more expensive diets are also somewhat richer in protein, minerals, and vitamins. The quality of the diets of the higher income groups depends on what is eaten and what is wasted, or the choice that is made in the abundance. Calorie for calorie, the food supply of families spending the largest amounts for food are only slightly higher in proteins, minerals, and vitamins than diets of low-income groups. If, however, the milk, vegetables, and fruits purchased are almost completely consumed, whereas considerable waste occurs in the fats, sugars, and grain products, the food actually eaten by the higher income groups may be considerably richer in mineral and vitamins than the diets of low-income groups.

The three following charts present average figures on the chemical composition of diets consumed in spring and summer months. With increasing expenditures for food the protein content and the potential energy value of the diets increase at about the same rate; hence the percentage of calories derived from protein is fairly constant. From 40 to 60 percent of the protein comes from animal sources.

THE HISTORY OF THE
CITY OF BOSTON

FROM THE FIRST SETTLEMENT
TO THE PRESENT TIME

BY
JOHN B. BOWEN

VOLUME I

THE FIRST SETTLEMENT
TO THE PRESENT TIME

THE HISTORY OF THE
CITY OF BOSTON

The amount of fat increases more rapidly than the amount of carbohydrate. At the lower levels of expenditure it appears that protein foods are given preference over fatty foods, in so far as can be judged by the rate of increase in consumption with increased expenditures for food.

Of the three mineral elements considered, calcium is the one in which low-cost diets are likely to be most deficient. It is in this element that the rate of increase in the content of the diet is most accelerated as the expenditures for food increase. But not until a level of food expenditure of \$97 to \$129 per capita per year (March-May 1935 retail food price level) is reached, is the average calcium content of the diet above probable minimum requirements for good health. The diets of most families spending less than \$65 per person per year are deficient with respect to all three minerals. The diets of many families spending less than \$100 per capita per year are inadequate with respect to one or more of these mineral elements.

Of the four vitamins considered, vitamin A is probably most abundantly supplied with reference to need, and vitamin B the least. With increasing expenditure for food the rate of increase in the vitamin B content of the diets is the least accelerated of the four.

Standards for Judging Dietary Adequacy

As yet much more is known about the kind of nutrients that should be included in the diet than about the exact amount required of each essential substance. This is particularly true since it is recognized that there are different planes of nutrition within the range commonly considered "normal." Diets that are good enough to keep families in average health may not be good enough to promote the best health, or to enable individuals to attain the best physical development of which they are capable. Much research will be needed before all of the nutritional requirements of human beings can be defined with a high degree of precision. It is instructive, however, to compare and appraise every-day diets with reference to some of the more significant factors for which some information is available regarding human requirements. As a working basis for this comparison suggested dietary allowances are shown on the next page.

The suggested energy allowances are set fairly close to probable average requirement because the consumption of a surplus of energy-yielding food results in the storage of fat, and an excess of body fat is burdensome. Of other dietary factors, a margin of safety over probable average minimum requirement is indicated. How wide this margin should be for different nutrients is not yet known. But in determining the margin of safety which the diet might well carry, possible losses due to improper methods of preparation and to incomplete utilization by the body should be considered, as well as the variations in human requirement and in food composition.

For protein, calcium, phosphorus, and iron, the figures allow a margin of approximately 50 percent over average minimum requirements for maintenance. Present consumption habits give an even greater prominence than this to protein, and there is evidence that the consumption of twice as much calcium as is obviously needed for maintenance contributes to general well-being. A range is suggested for iron. The lower quantities probably are fully adequate if the iron in the food as eaten is present in available form.

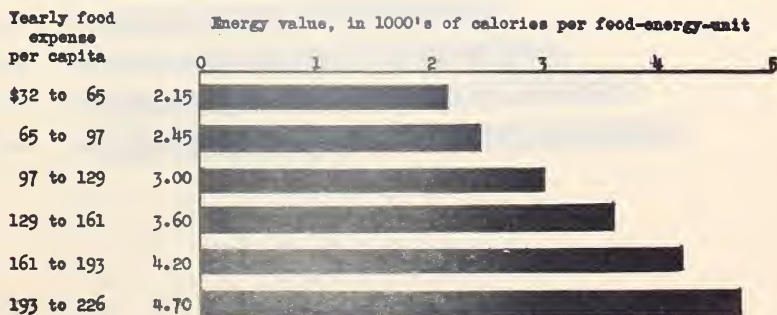
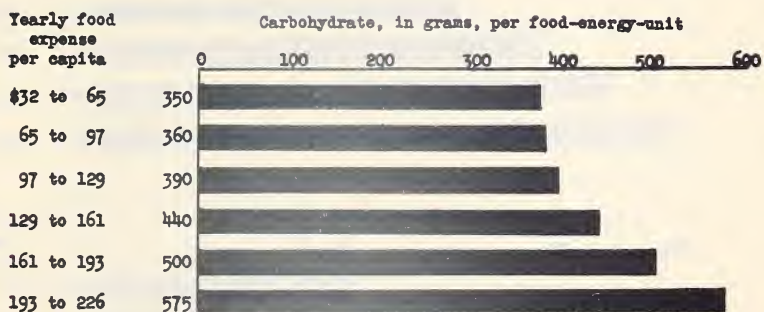
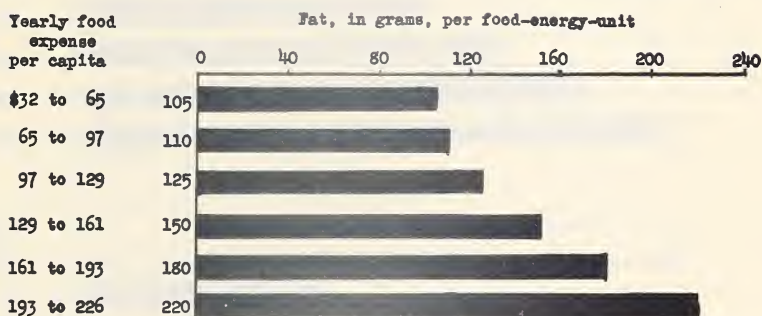
A margin of 50 percent or more over minimum requirements is indicated for each of the several vitamins. In the case of vitamin C, the higher values are suggested for use in evaluating diets when the computations of nutritive value are based, in the main, on factors representing the composition of untreated raw products. The vitamin C content of foods in their fresh, natural state may be greatly lowered during storage and cooking. In the case of the other vitamins, the smaller quantities probably are sufficient to maintain an average state of health, while the larger quantities represent conservative estimates of what might be called good investments in better-than-average nutrition. These more generous allowances are entirely feasible for large groups of the population. They represent levels that can be afforded by many families if careful selection is made among available food supplies. It is possible that future research may show that for some constituents the margin of safety included in the figures of Table 12 are unnecessarily generous; on the other hand, still wider margins for others may later be found desirable.

While many people subsist on diets that fail to meet these nutritional levels, without suffering from hunger nor a degree of ill health recognized as "disease", it is desirable to set dietary standards high enough to maintain the fullest degree of health which a completely adequate diet would make possible.

Figures showing variations within the averages presented graphically for spring and summer months are not yet available. In a detailed study of winter diets of wage-earning families living in North Atlantic cities, it was found that all of the families spending at a level of \$193 to \$226 per capita per year obtained food supplies that met or exceeded the "minimum" nutritional needs of the families. Over 80 percent of those spending \$129 to \$161 per capita yearly were equally fortunate. But less than 25 percent of those who were spending between \$65 and \$97 per capita yearly had diets that met or exceeded "minimum" requirements in every respect.

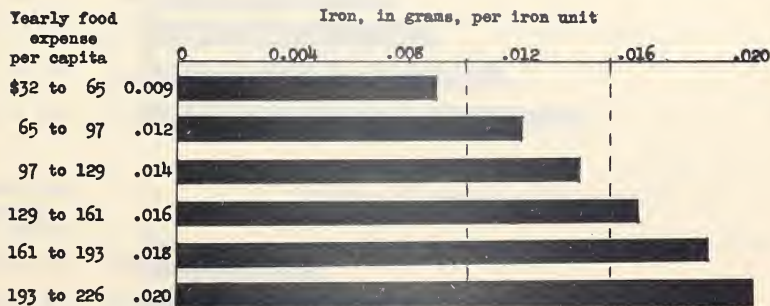
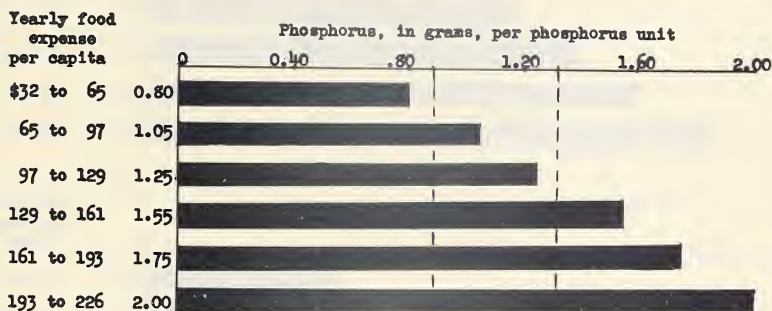
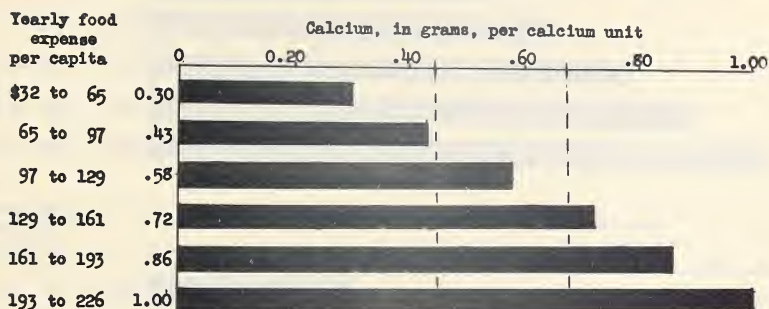
Of all nutrients, calcium and vitamin B appeared to be least abundantly furnished with respect to need; and protein, most abundantly.

PROXIMATE COMPOSITION AND ENERGY VALUE of diets of families of
employed wage earners and low-salaried workers:
May - August 1935
(30 industrial cities, 12 States - U. S. A.)



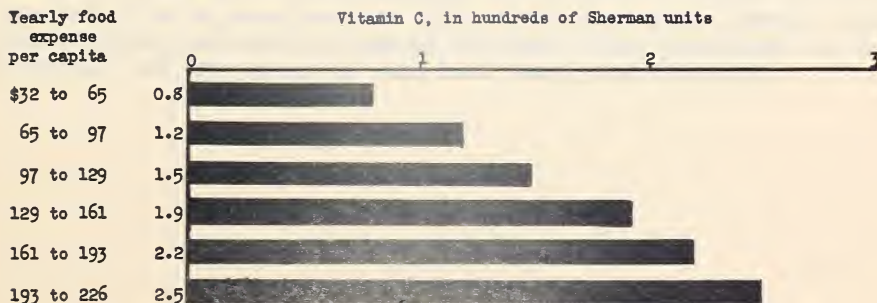
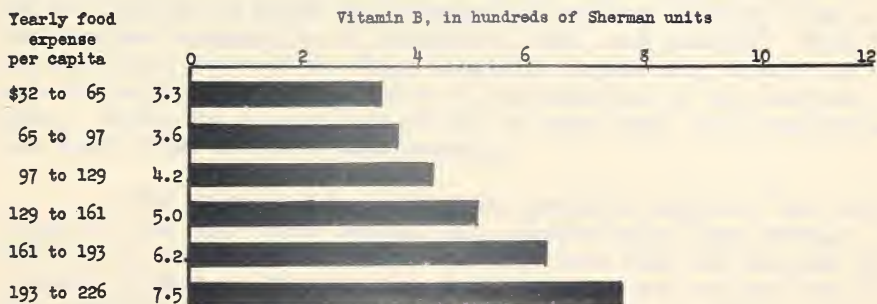
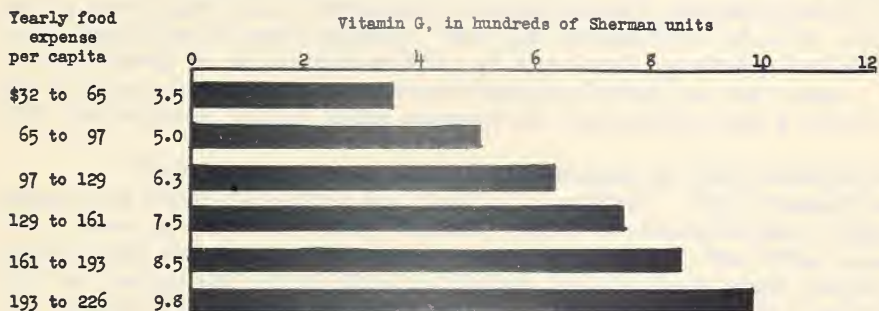
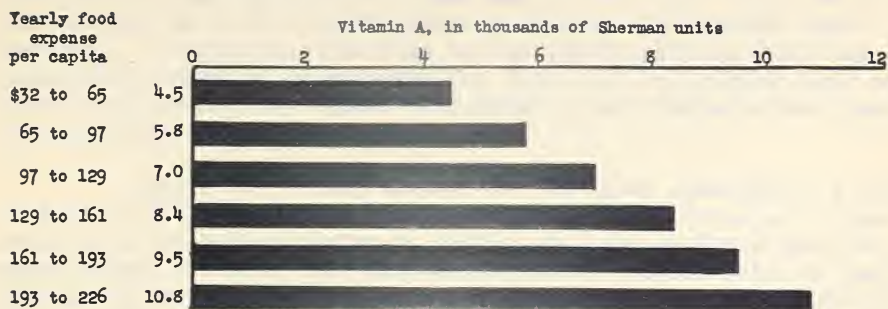
MINERAL CONTENT of diets of families of employed wage earners
and low-salaried workers: May - August 1935

(30 industrial cities, 12 States - U. S. A.)



VITAMIN CONTENT of diets of families of employed wage earners
and low-salaried workers: May - August 1935
per nutrition-unit per day

(30 industrial cities, 12 States - U. S. A.)





Some Regional Differences in Food Consumption.

Two pages of charts follow which show: for five different geographical regions, consumption during the spring months of 1935 of families who were spending the same amount for food. This level of expenditure for food is well above the median for employed wage-earners. It represents families in the third quartile when they are arranged by level of expenditure for food. It is probable that more marked differences may appear when families are compared who spend comparatively little for food.

During the spring months, for families spending at a level of \$129 to \$161 per capita yearly for food, the differences in consumption of milk from region to region are less striking than one might expect to find. The East South Central region which is usually considered to fall short in milk consumption gives a report about as high as the average for other regions. Probably this can be explained by the fact that this comparison is made between comparatively well-to-do families in every region. The low consumption of milk, which is considered to be characteristic of the South, probably reflects the high percentage of low-income families living in that area. Their milk consumption is far below average for the country as a whole.

There appear to be marked differences in the consumption of butter and other fats from one region to another. The consumption of total fats in the East South Central region is conspicuously high; whereas the consumption of butter tends to be low. The total consumption of butter and other fats is higher for the East South Central and for the Pacific region than for others. This fact may be significant taken in connection with the figures on lean meat, poultry, and fish. The two regions in which the consumption of fats is high, show a lower than average consumption of lean meat, fish, and poultry. This fact has also been observed in other studies. Apparently either fat or meat is required to give a sense of satisfaction to the American consumer. Where the consumption of fat is very high, the consumption of lean meat often is lower than average.

The chart dealing with grain products suggests that families living in the East North Central eat somewhat more than average, and families in the Mountain region somewhat less than the average quantity of grain products. Whether this will be borne out as data become available referring to other economic levels, or other seasons of the year remains to be seen. The percentage of the grain products purchased in uncooked form is conspicuously high in the East South Central region. This probably reflects the amount of wheat flour purchased for hot biscuits, and the amount of corn meal and grits consumed.

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In the spring months the consumption of vegetables and fruits appears to be lower in the North Atlantic and Mountain regions than in the South and in the Pacific regions. This undoubtedly reflects differences in local supplies and prices. Vegetable and fruit production is high in the South and in California during these months; prices are lower than for the country as a whole. A high percentage of the vegetables and fruits consumed in the Pacific region belong to the group noted for special nutritive values, tomatoes, citrus fruits, leafy green and yellow vegetables.

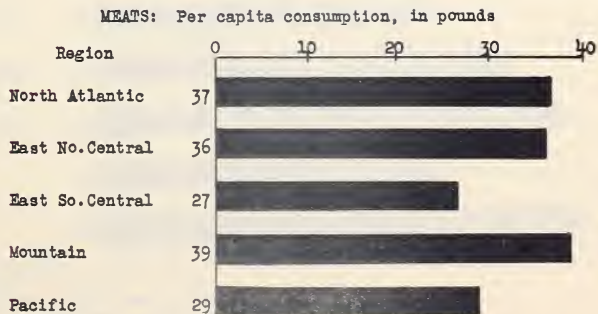
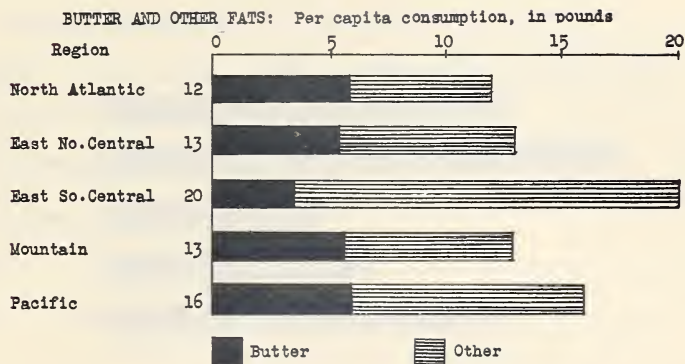
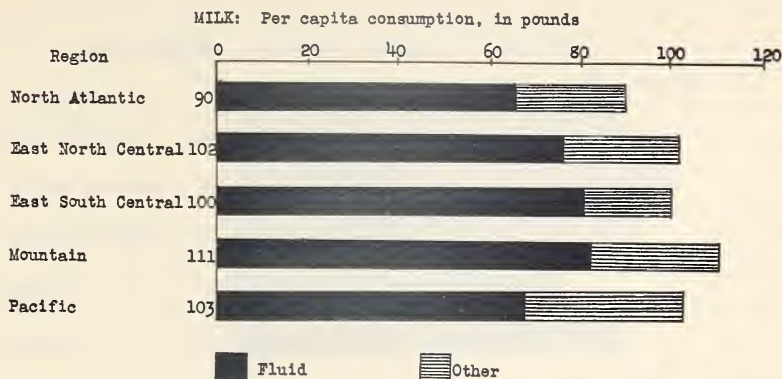
The consumption of potatoes and sweetpotatoes varies greatly from region to region during the spring months. It is high in the North and low in the South. This situation is probably tied up with the fact that sweetpotatoes, which form a large share of the potato-sweetpotato consumption in the South, are not in season during March, April, and May; whereas the supply of white potatoes, used chiefly in the North, is still fairly abundant and prices low.

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1880

REGIONAL DIFFERENCES in food consumption of families of employed wage earners and low-salaried workers spending \$129 to \$161 yearly per capita for food:

March - May 1935

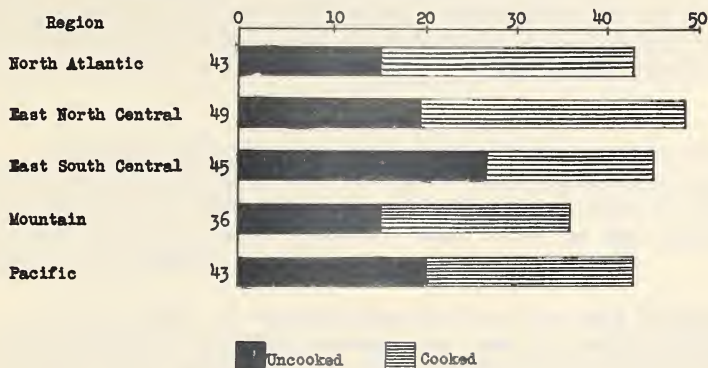
(28 cities in 12 States in U. S. A.)



REGIONAL DIFFERENCES in food consumption of families of employed wage earners and low-salaried workers spending \$129 to \$161 yearly per capita for food:
March - May 1935

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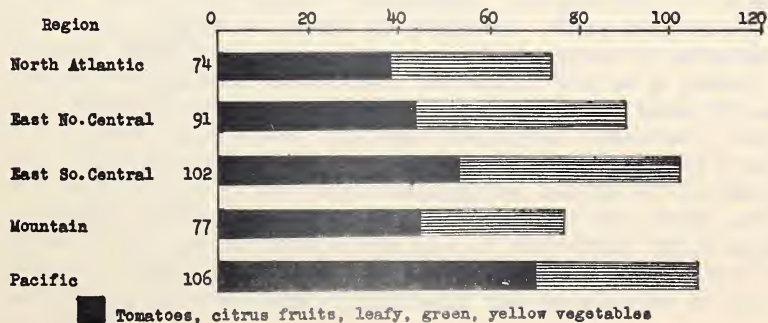
GRAIN PRODUCTS: Per capita consumption, in pounds



POTATOES, SWEETPOTATOES: Per capita consumption, in pounds



FRUITS AND VEGETABLES^{1/}: Per capita consumption, in pounds



^{1/} Exclusive of potatoes and dried legumes

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
RESEARCH REPORT

1. Title: *Study of the reaction of hydrogen peroxide with various organic compounds.*
2. Author: *John Doe*
3. Date: *1965*
4. Location: *Chicago, Illinois*
5. Subject: *Chemistry, Organic*

6. Summary: *This report describes the reaction of hydrogen peroxide with various organic compounds. The reaction was studied under various conditions of temperature, concentration, and time. The results show that the reaction is first order with respect to the concentration of hydrogen peroxide and second order with respect to the concentration of the organic compound. The rate of reaction increases with increasing temperature and decreasing concentration of the organic compound.*

7. References: *1. Smith, J. D. J. Am. Chem. Soc. 80, 1234 (1958).
2. Doe, J. J. Org. Chem. 30, 123 (1965).
3. Brown, A. B. J. Am. Chem. Soc. 85, 1234 (1963).
4. White, C. D. J. Org. Chem. 28, 123 (1963).
5. Green, E. F. J. Am. Chem. Soc. 82, 1234 (1960).*

Distribution of Families by Level of Expense for Food

The last chart shows the percentage of the urban and village families, studied between 1914 and 1933, whose expenditures for food fell at each of the ten levels indicated, together with a comparable distribution of employed wage earners and low-salaried clerical workers studied in 1935-36. Only one-sixth of the families in the latter group were in the three lower levels of expenditure for food, whereas one-fourth of the group studied earlier were.

Families spending at these three lower levels are very likely to have diets deficient in one or more nutritive factors. Almost 30 percent of the families of both groups fell in the fourth group. The diets of these families tend to be on the borderline of "minimum" requirements.

About half of the families fell in the six highest groups. These families were spending enough for food to obtain adequate diets, if reasonable care were taken in the selection and preparation of food. It should be remembered, however, that "minimum" requirements are probably far below optimal.

The quartile of the nonfarm population spending the most for food consumes about one-third of the milk, fruits, and vegetables (other than potatoes and dried legumes) and of meat, fish, and eggs, whereas the quartile spending the least for food consumes about one-sixth of those products. How much the urban demand for different products would be increased if the level of expenditure for food were increased, or if the food prices to consumers were reduced, is a question of considerable interest. If the entire nonfarm population were really adequately fed without deviating more than necessary from current consumption habits, there would be need for greatly increased supplies of food, particularly of fruits, vegetables, butter, milk, eggs, and possibly meats.

The statements on food habits of urban families in this report are based on all data available at the moment. It is recognized that these are rather fragmentary; the analysis of diets of employed wage earners is still in progress. When completed, our knowledge of American dietary habits will be greatly extended. Also, a study of consumer purchases, now under way as a Federal Works Project (cooperatively undertaken by the Bureau of Home Economics, Bureau of Labor Statistics, National Resources Committee, and Works Progress Administration) will furnish more authoritative figures, both on differences in the food consumption habits of different socio-economic groups spending the same amounts for food, and on the share of the native white families of different types spending at different levels for food. We look forward to a broader base for evaluating the adequacy of diets of the population of the United States.

THE HISTORY OF THE UNITED STATES OF AMERICA

The first part of the history of the United States of America is the period from the discovery of the continent by Christopher Columbus in 1492 to the establishment of the first permanent settlements. This period is characterized by the exploration of the continent by Spanish, French, and English explorers, and the establishment of the first permanent settlements by the English in 1607.

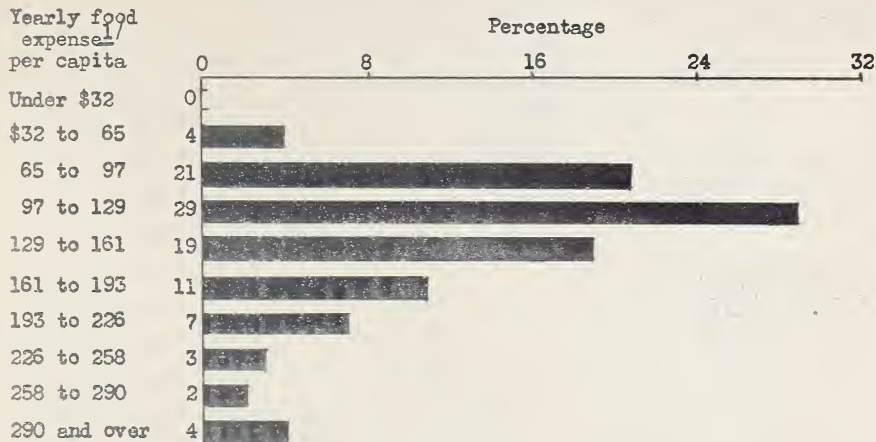
The second part of the history of the United States of America is the period from the establishment of the first permanent settlements to the American Revolution in 1776. This period is characterized by the growth of the colonies, the struggle for independence from Britain, and the establishment of the United States as a new nation.

The third part of the history of the United States of America is the period from the American Revolution to the Civil War in 1861. This period is characterized by the struggle for the abolition of slavery, the expansion of the territory, and the establishment of the United States as a federal republic.

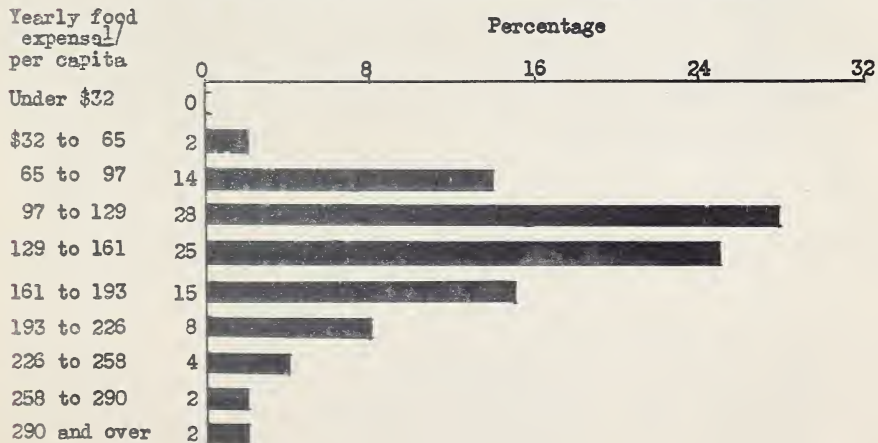
The fourth part of the history of the United States of America is the period from the Civil War to the present. This period is characterized by the Reconstruction era, the Gilded Age, the Progressive Era, the Great Depression, and the modern era. This period is characterized by the growth of the United States as a world power, the struggle for civil rights, and the establishment of the United States as a superpower.

The fifth part of the history of the United States of America is the period from the present to the future. This period is characterized by the challenges of the future, the role of the United States in the world, and the hope for a better future for all Americans.

1914-1933: Distribution of nonfarm families supplying food records
by level of expense for food
(1,020 families in cities and villages of 44 States and the District of Columbia)



1935-36: Distribution of families of employed wage earners and low-salaried workers supplying food records, by level of expense for food
(2,746 families in 32 industrial cities in 13 States)



¹/ Adjusted to March - May 1935 retail food price level.

Preliminary figures -- U. S. Bureau Home Economics,
in cooperation with U. S. Bureau Labor Statistics
and Works Progress Administration.

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